



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10:087,734	03/05/2002	Ching-Feng Lai	H20002	6993

34003 7590 06/03/2003

INTELLECTUAL PROPERTY SOLUTIONS, INCORPORATED
5717 COLFAX AVENUE
ALEXANDRIA, VA 22311

EXAMINER

NGUYEN, HANH N

ART UNIT PAPER NUMBER

2834

DATE MAILED: 06/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/087,734

Applicant(s)

LAI ET AL.

Examiner

Nguyen N Hanh

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Remarks

1. In view of amendments, the Examiner withdraws the objection to claims 6,7,13 and 14.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4,6-11,13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Takeuchi et al.

Regarding claim 1, Applicant's admitted prior discloses a stator for a motor comprising: a core having a hollow portion and a plurality of tooth portions protruding from the hollow portion in a radial manner; a plurality of insulators, corresponding to the tooth portions, disposed around the corresponding tooth portion respectively; a plurality of windings, corresponding to the insulators, disposed around the corresponding insulator respectively (Fig. 2). Applicant's admitted prior art fails to show a plurality of back-iron portions surrounding the core and contacting the insulators along a direction opposite to the protruding direction of the tooth portions.

However, Takeuchi et al. disclose a stator structure wherein an integral core is segmented into core sections (11) for the purpose of reducing cost of material.

Since Applicant's admitted prior art and Takeuchi et al. are in the same field of endeavor, the purpose disclosed by Takeuchi et al. would have been recognized in the pertinent art of Applicant's admitted prior art.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Applicant's admitted prior art by constructing a formerly integral back-iron portion into plurality of portions surrounding the core and contacting the insulators along a direction opposite to the protruding direction of the tooth portion as taught by Takeuchi et al. for the purpose of reducing cost of material.

Regarding claim 8, it is noted that all of the limitations of the claimed invention have been fulfilled by Applicant's admitted prior art and Takeuchi et al.

Regarding claim 2 and 9, the core pieces disclosed by Takeuchi et al. are connected to each other by welding for the purpose of bonding segmented pieces together.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Applicant's admitted prior art by constructing a formerly integral back-iron portion into plurality of portions and the back-iron portions are connected with each other by welding as taught by Takeuchi et al. for the purpose of bonding segmented pieces together.

Regarding claim 3 and 10, It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to have back-iron portions connected with each other by adhesion since the Examiner takes Official Notice of the equivalence of welding or using adhesion to bond back-iron portions with each other.

Regarding claim 4 and 11, the core piece disclosed by Takeuchi et al. is provided with a recessed portion and a projecting portion for the purpose of holding segmented pieces together.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Applicant's admitted prior art by constructing a formerly integral back-iron portion into plurality of portions and wherein each of the back-iron portions is provided with a recessed portion and a projecting portion, whereby the back-iron portions are connected with each other by the engagement between the recessed portion and the projecting portion as taught by Takeuchi et al. for the purpose of holding segmented pieces together.

Regarding, claim 6 and 13, the core piece disclosed by Takeuchi et al. is made of magnetic material (Col. 2, line 34).

Regarding claims 7 and 14, Applicant's admitted prior art discloses the claimed invention except showing the back-iron portions are made of magnetic material. It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to use magnetic material for the back-iron portions since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

3. Claims 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Takeuchi et al. and further in view of Smith.

Regarding claims 5 and 12, the structure disclosed by Applicant's admitted prior art, modified by Takeuchi disclose the invention except for showing the stator further comprising: a restricting portion surrounding the back-iron portions so that the back-iron portions contact each other around the core.

However, Smith discloses a stator structure further comprising: a restricting portion (24 in Fig. 13) surrounding the back-iron for the purpose of holding the stator core.

Since Applicant's admitted prior art, Takeuchi et al. and Smith are in the same field of endeavor, the purpose disclosed by Smith would have been recognized in the pertinent art of Applicant's admitted prior art and Takeuchi et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Applicant's admitted prior art by constructing a formerly integral back-iron portion into plurality of portions surrounding the core and using a restricting portion surrounding the back-iron portions so that the back-iron portions contact each other around the core as taught by Smith for the purpose of holding the stator core.

Response to Arguments

4. Applicant's arguments filed on 1/24/2003 have been fully considered but they are not persuasive. The applicant's argument is on the ground that "neither Applicant's admitted prior art nor Takeuchi teaches or suggests the back-iron portions surrounding the core and contacting the insulator (or the tooth portions as in claim 8) along a direction opposite to the protruding direction of the tooth portions as recited claim 1".

The Examiner respectfully disagrees with the Applicant. It is noted that in Fig. 2 (prior art) of the present invention or in Fig. 3 of Takeuchi show the back iron surrounding the core and contacting the insulator (and the tooth portions) along a direction opposite to the protruding direction of the tooth portions. The only difference is the back iron is formed from the circular laminations instead of segmented laminations. The purpose of making segmented portions is reducing the size of material and reducing the scrap as disclosed in Fig. 4,5 and in page 6, lines 10-20 of the specification. However, Takeuchi et al. teach the circular core piece is divided into segments to reduce the size of material (Col. 2, lines 26-29). It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Applicant's admitted prior art by constructing a formerly integral back-iron portion into plurality of portions surrounding the core and contacting the insulators along a direction opposite to the protruding direction of the tooth portion as taught by Takeuchi et al. for the purpose of reducing cost of material. Moreover, it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

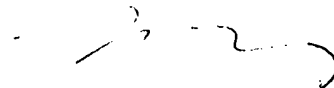
mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Information on How to Contact USPTO

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh N Nguyen whose telephone number is (703)305-3466. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703)308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3431 for regular communications and (703)305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-1782.



HNN

May 23, 2003